International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Factors Associated with Stress and Anxiety among Pregnant Women Attending at Bharatpur Hospital, Chitwan

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Abstract: ***Pregnancy is a period of great joy, also great stress to women both physically and mentally. Even in healthy women pregnancy may give rise to much anxiety because of anticipated uncertainty associated with it. This study was conducted to identify the factors associated with stress and anxiety among pregnant women, attending at Bharatpur Hospital, Chitwan. A descriptive cross-sectional study design was used from 380 pregnant women attending at antenatal outpatient department (OPD). Data was collected by using non probability purposive sampling technique. A semi structured interview schedule and modified standardized tools wasdeveloped by Janet F. WangandWestern Australian Department of Health's. Chi square and spearman correlation was used to determine the association and relationship between stress and anxiety level.The study findings revealed that 32.6% had severe,33.9% moderate and 33.4% Eustress (normal stress) level of stress. The significant influencing factors for the level of stress on pregnant women were husband support (p=0.04).Similarly 74.2% had minimal, 23.4% mild to moderate and 2.4% respondents have severe level of anxiety. The significant influencing factors for the level of anxiety in pregnant women were family income (p=0.03) and family support (p-0.03).There was statistically significant of average positive correlation between stress and anxiety (r=0.605, p=0.001) among pregnant women. Findings showed that those pregnant mother presence of higher stress which reflects the higher anxiety among those mothers.***

Keywords: Anxiety, Bharatpur Hospital, Pregnant women, Stress

1. Introduction

Health is a state of complete physical mental and social wellbeing and not merely the absence of disease or infirmity {World health Organization (WHO), 1948}.

Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2011).

Stress is a perceived when there is an imbalance between demands of life and the adaptive capacity of an individual can lead to series of stress response mechanisms in different domains like psychological, physiological and behavioral (Vijayaselvi, Beck, Abraham, Kurian, Regi & Rebekah, 2015).

Anxiety is a dimension of stress that across in response to internal or external stimuli and can result in physical, emotional, cognitive and behavioral symptoms (Jusoh et al., 2014).

Pregnancy is the state of carrying a developing embryo or fetus with in the female body. This condition can be indicated by positive results on an over the counter urine test, and confirmed through a blood test, ultrasound, detection of fetal heartbeat, or an X-ray, pregnancy last for about nine months, measured from the date of the women last menstrual period(LMP). It is conventionally divided into three trimesters, each roughly three months long the first trimester (Conception to 12 weeks), second trimester (13 to 26 weeks) and third trimester (27 until birth) (Webster's Medical New World Dictionary, 2008).

Female as a gender is itself susceptible for stress, anxiety and depression, and there may be dread of childbirth are vulnerability for surgical intervention and subsequent psycho-social issues (Priyambada, Pattojoshi & Bakhla, 2017).

Researches have shown a high prevalence of psychiatric illness in women, not only in the developed countries, but also in developing countries such as Turkey.Furthermore, a large body of research exists on the adverse outcomes of maternal psychological ill health, most notably depression and anxiety during pregnancy. psychiatric illness during pregnancy is considered to contribute to prematurity, low birth weight and obstetric complications (Kang,et al., 2016).

In developing countries, mental health has not received much attention. Depression and anxiety rates among women are less well known, but presumably higher. It has been estimated that in developing countries, one in-three to one-in five women experiences a significant mental health problem, comparing to one in-ten in developed countries. It is assumed that this high prevalence is the result of lower socioeconomic development of the population, abuse, violence and deficiency in mental health care. The latter is confirmed in the 2011 WHO Mental Health Atlas, which showed that only 36 % of people living in low-income countries are covered by mental health care (Verbeek, Arjadi, Vendrik, Burger & Berger, 2015).

Mood and anxiety and their related disorders (AD) account for a significant proportion of mental health conditions, with close to thirty percent of the population (28.8 %) suffering from an anxiety disorder at some time in their life, and over fifteen percent of the population (16.2 %) suffering from a mood disorder. Half of all depressed patients also report symptoms meeting criteria for one or more AD. The

perinatal period is of particular importance as maternal mood and anxiety difficulties are associated with adverse pregnancy outcomes, compromised parenting, impaired affect and behavior regulation, and insecure attachment in offspring (Fairbrother, Young, Janssen, Antony & Tucker, 2015).

According to the (WHO, 2010) mental, neurological, and substance abuse (MNS) disorders are responsible for 14 % of the global burden of disease in both men and women. Especially during pregnancy, anxiety and depression are highly prevalent and are known to have a range of serious negative of anxiety and depression during pregnancy is the most crucial risk factor for having these symptoms in the postpartum period.

Stress is very common among women during pregnancy, and it can cause adverse birth outcomes such as low birth weight. Several studies reported the rates of psychosocial symptoms during pregnancy for the developed world as between 10 and 15%, while in developing countries, the rate was found to be 33%. (Madhavanprabhakaran, D'souza & Nairy, 2015).

Many of the stressed women suffer from common mental health disorder during early pregnancy and in the postpartum period. Prevalence of stress during pregnancy has been found to range from 6% to as high as 52.9% in developing countries. Stress during pregnancy is more among the teenagers, low educational status, discriminated group of population or with low socioeconomic status (Pantha, Hayes, Yadav, Sharma, Shrestha & Gartoula, 2014).

2. Materials and Methods

A descriptive cross-sectional study design was used.Enumerative sampling technique was used. A total of 380 pregnant womenwho have 12 weeks to 38 weeks of gestation and willing to participate were observed from June 27 to July 27 2017 attending antenatal OPD of Bharatpur Hospital. We exclude the case of first trimester (due to physiological changes there is a chance of early stress) and after term (due to pain initiated by labour).

Researcher used the Pregnancy Stress Rating Scale (PSRS) and Perinatal Anxiety Screening Scale (PASS) to measure factor associated with stress and anxiety among pregnant women. Stress was further categorized into 3 stagesMild stress (Eustress), Moderate stress andsevere stress. Anxiety also classified into Minimal anxiety, Mild to moderate andsevere anxiety.

Ethical approval was obtained from Chitwan Medical College Institutional Review Committee (CMC-IRC) and Chitwan Medical College Teaching Hospital. Verbal informed consent was obtained from each participant by explaining the purpose of the study to them. Entire study period was from 14/05/2017 to 01/09/2017. All collected data was reviewed and checked manually for completeness, consistency and accuracy. Subsequently the data was coded and entered into EPI data 3.1. The entered data was then exported into IBM SPSS version 20 for analysis. The data was analyzed by using descriptive statistics (frequency, percentage, mean and standard deviation). Inferential statistic, an odd ratio with a 95% confidence interval was calculated.

3. Results

Table 1: Socio-demographic Characteristic of the Respondents, n=380

Variables	Frequency	Percentage
Age group (in years)		
≤20	50	13.1
20-35	327	86.1
≥35	3	0.8
Mean ± SD=23.6±3.82 Min=16 years Max=40 years		
Ethnicity		
Brahmin/ Chhetri	165	43.4
Janajati	151	39.7
Dalit	50	13.2
Madheshi	8	2.1
Others[a]	6	1.6
Religion		
Hindu	321	84.5
Buddhist	44	11.6
Christian	15	3.9
Residence		
Rural	245	64.5
Urban	135	35.5
Educational status		
Literate	376	98.9
Cannot read and write	4	1.1
Educational level (n=376)		
Adult education	6	1.6
Basic education	98	26.1
Secondary education	199	52.9
Higher education and above	73	19.4
Occupation		
House hold work	232	61.0
Agriculture	57	15.0
Service	55	14.5
Business	36	9.5

[a] *Others-Giri & Puri*

Table 1 shows that out of 380 participants, the majority of the (86.1%) belong to age group 20-35 with the Mean ± SD age of 23.6 ±3.82. Regarding ethnicity 43.4% were Brahmin/Chhetri. In terms of religion majority respondents (84.5%) belong to Hinduism. Around two third of the respondents (64.5%) were from rural area. In terms of education, majority of the respondents (98.9%) were literate among the literate respondents more than half of the respondents (52.9%) had up to secondary level. Concerning occupation 61.0% respondents were engaged in house hold work.

Table 2: Level of Stress of the Respondents during Pregnancy

Level of Stress	Frequency	Percentage
Eustress score (≥97)	127	33.5
Moderate Stress score (84-97)	129	33.9
Severe Stress score (≤84)	124	32.6
Total	**380**	**100.0**

Table2 shows thatlevel of stress of the respondents during pregnancy among 380 respondents, one third respondents (33.9%) had Moderate level of Stress during pregnancy.

Table 3: Level of Anxiety during Pregnancy of the Respondents

Level of Anxiety	Frequency	Percentage
Minimal Anxiety (0-16)	282	74.2
Mild to Moderate Anxiety (17-33)	89	23.4
Severe Anxiety (34-75)	9	2.4
Total	**380**	**100.0**

Table 3 shows that level of anxiety during pregnancy of the respondentsmore than two third of the respondents (74.2%) had minimal anxiety, which was followed by very least (2.4%) of the respondents had severe anxiety during pregnancy.

Table 4: Relationship between Level of Stress Scores and Anxiety Scores of the Respondents, n=380

Variables	Correlation	P-value
Stress score and anxiety	0.605	0.001

Significance level of P-value at 0.05
∗*Spearman correlation coefficient*

Table 4 depicts that relationship between respondents' level of stress scores and level of anxiety scores of the respondents by Spearman's correlation coefficient. There was statistically significant of strongly positive correlation between stress and anxiety (r=0.605, p=0.001) among pregnant women. Findings shows that those pregnant mother presence of higher stress which reflect the higher anxiety among those mothers.

4. Discussion

In human life cycle pregnancy is the normal developmental phase. Where different situations are faced entire pregnancy that may lead the stress and anxiety, that may cause physiological, psychological and social consequences from normal to severe stages that may lead to increase the morbidity and mortality rate of maternal and fetus. So this study was designed to identify the factors associated with stress and anxiety among pregnant women attending at Bharatpur hospital, Chitwan. Which helps to identify the cause for screening

Socio-demographic Characteristics of the Respondents
The study revealed that most of the respondents (86.1 %) belong to age group 20 – 35 years with mean age *23.6±3.82* years. This result is consistent with the study done by Juosh et al. (2014) who studied "anxiety symptoms and associated factors among outpatient antenatal mothers: a cross sectional study" at university Malaya medical Centre revealed that 83.8% of the respondents were from age group 19-34 years; Another study done by Panta etal. (2014) where about two third of the respondents(76.0%) were among the age of 20-29 years with mean age 25.96±4.67; along with this the study conducted by Karmaliani et al. (2009) shows that most of the (69.0%) respondents age belong in between 21-30 years of age. Regardingethnicity result of this study showed that less than half of the respondents (43.4%) belong to Brahmin/Chhetri ethnicity 84.5% respondents belong to Hinduism. Which is supported by the study done in Nepal by Shrestha and Awasthi (2016) had similar findings related to religion 88.0 %. 64.5% of respondents residing in rural area. In regards to status of education majority of the respondents (98.4%) belong to literate category. Which is supported by the study done by Shrestha and Awasthi (2016) which study reported that majority of the respondents (95.0%) reported to literate group. In contrast to this findings of the study done by Nasreen et al (2011) where greater than 45.3% respondents were literate.In the current study more than half of the respondents (52.9%) belong to secondary level of education.

The study shows that two third of respondents (60.5%) were engaged in house hold work. Similarly (57.0)% of the respondents used to work at home, this result are consistent with study done by Panta et.al (2014) 57.0% respondents belong to house hold activity. Majority of the respondents (98.4%) husband were literate, among them more than half of the respondents husband had the secondary level of education. Near about two third of the respondents (60.5%) husband engaged in services.

More than two third of the respondents (69.5 %) belong to joint family. This result is consistent with the study done by Panta etal. (2014) which showed that 65.0% of the respondents lived in a joint family. This finding is also supported by similar study done by Paise et al (2014) which revealed that 62.5% respondents belong to joint family. More than two third of the respondents (63.5%) had their annual income within 200000-600000, similarly this result in consistent with the study done by Panta etal (2014) where 68.0% respondents had their monthly income below 10000 per month.

Level of Stress on Pregnant Women
About one third of respondents (33.4%) have Eustress it literally means 'good stress' where stress enhance function, another one third (33.9%) had moderate level of stress and rest of the 32.6% respondents had severe stress which is contradictory findings to the study conducted by Nagenda et al (2016) reported that (2.1%) respondents had mild stress, (1.4%) had moderate stress and (0.7%) had severe stress.

Level of Anxiety the Pregnant Women
About three fourth of respondents (74.2%) have minimal anxiety only 23.4% have mild to moderate level of anxiety and rest of the very least of the respondents (2.4%) have severe level of anxiety.

Association between Stress Level and Anxiety Level Regarding Pregnant Women and Selected Variables
Findings of the present study unveiled that stress levels of the pregnant women were significant associated with anxiety level with husband support during pregnancy (p=0.04) which indicated that the 43.7 % severe stress may cause due to average husband support. Family income was also significantly associated with anxiety during pregnancy (p=0.03).It indicated that the 5.6 % severe anxiety may cause due to family income below 2000000 per year.

Family support was statistically significant with anxiety during pregnancy (p=0.03).It indicated that the 2.8 % had severe anxiety may cause due to average family support.

Relationship between Stress Score and Anxiety Score Regarding Pregnant Women

Findings of the present study reported that there is positive relationship (r=0.605, p= 0.001) between stress and anxiety score regarding pregnancy among respondents which is statistically significant. This indicates that the pregnant women who had higher stress score possessed the positive relation with anxiety level.

5. Conclusion

Based on the findings of the study, it is concluded that one third of the respondents were suffered by different levels of stress respectively and very least of the respondents were suffered by anxiety. The significant influencing factors associated with antenatal stress and anxiety were husband support, family income, mode of delivery and family support during pregnancy. There is strong positive correlation was found between stress and anxiety score.This depicts that if stress is higher anxiety also increase or if stress level is low anxiety also decrease in pregnant women.

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